

**GENERAL CONTRACTOR/CONSTRUCTION
MANAGEMENT (GC/CM) FORM OF
CONTRACTING: ISSUES AND
RECOMMENDATIONS**

FEBRUARY 12, 2004



City of Seattle

Office of City Auditor

Susan Cohen, City Auditor

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To make City government as efficient, effective, equitable, and accountable as possible.

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City of Seattle

Office of City Auditor



Susan Cohen, City Auditor

February 12, 2004

The Honorable Greg Nickels
Councilmembers
City of Seattle
Seattle, Washington

Dear Mayor Nickels and City Councilmembers:

Attached is our report on *General Contractor/Construction Manager Form of Contracting: Issues and Recommendations*. Our objective for this review is to identify and share effective practices in managing construction projects under the GC/CM method of contracting. This review provided the opportunity for an analysis of various approaches used by City departments, and for discussion among the City's capital project leaders regarding these approaches. Our review resulted in recommendations to improve the City's management of future GC/CM projects.

We found the City of Seattle could refine management of GC/CM projects by:

- Using practices that protect the competitive process when the GC/CM bids to perform part of the subcontract work;
- Making strategic choices regarding the allocation of responsibility for project risks;
- Performing due diligence in reviewing project costs; and
- Communicating these and other matters very clearly in the contract documents.

To continue improving practices, we recommend that the City collect data on the outcome of various approaches, evaluate the outcomes, and feed that information back to all project managers for application to future projects.

Sincerely,

Susan Cohen
City Auditor

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CHAPTER 1: INTRODUCTION AND SUMMARY

The Office of City Auditor is focusing audit attention on construction projects because they currently represent an annual dollar value nearly equal to the City's annual General Fund expenditures (\$500 million in 2003). For the purposes of this report, our approach is to review project management practices used by City departments that manage Capital Improvement Program (CIP) projects. Our objective for this kind of review is to identify effective practices and disseminate that information so that the overall performance of the City's CIP project managers improves over time and construction projects are managed as cost effectively as possible.

The focus of this report is construction projects using the General Contractor/Construction Manager (GC/CM) form of contracting. The GC/CM method removes some of the constraints of the traditional low-bid process and provides considerable flexibility to public agencies in selecting a general contractor. In contrast to the traditional low-bid form of contracting, the GC/CM approach allows the City to select a contractor, who also serves as construction manager, based on qualifications as well as price. Many more elements of the project cost are open to negotiation between the owner and the GC/CM. This process results in a guaranteed contract cost made up of a negotiated maximum allowable construction cost (MACC), a fixed amount for specified general conditions, a bid fee covering GC/CM overhead and profit, and state sales tax.

The flexibility of negotiating the MACC is one of the advantages of GC/CM contracting for public administrators. It also makes it challenging to identify best practices, because practices are subject to negotiation and will vary with circumstances. Practices also vary from department to department, because City departments have independent authority to manage their construction projects. Currently, there is no institutional mechanism for department CIP project managers to share their experiences with other departments so that the overall quality of the City's management of CIP projects improves.

We would like to extend our thanks to the people who assisted with this report by sharing their approaches and suggesting wording to explain technical concepts: Shelly Yapp, Ken Johnsen, Craig Norsen, Alex Harris, Bill McGillin, Bill Wells, and John Franklin, all of whom worked on behalf of the City of Seattle; Steve Goldblatt of the University of Washington, and Jesse Franklin of the Law Firm of Preston, Gates, Ellis.

RESULTS IN BRIEF

We found the City of Seattle could refine its contract management practices by clarifying contract language and sharing lessons learned from current and previous GC/CM projects. We identified six issue areas that warrant careful reflection and conscious choice, because differences of approach can affect project outcomes and project cost. In this report we discuss these issues and make the following recommendations:

1. Use additional controls when the GC/CM bids to perform part of the work, because this puts the GC/CM in a dual role of owner's agent (construction manager) and subcontractor.

2. Analyze the project risks and make strategic choices about assigning responsibility for risk and control of the contingency to avoid risk.
3. Use clear contract language regarding key items:
 - 3a. Be explicit in contract language regarding the assignment of risk and contingency, especially the risk associated with incomplete project drawings.
 - 3b. Be explicit in contract language regarding the control and use of buyout savings.¹
4. Carefully review changes for appropriate pricing, overhead, and profit.
 - 4a. Perform due diligence in establishing the price for all contract changes.
 - 4b. Watch for possible multiple layers of markup for overhead and profit.
5. Choose the best option for pricing preconstruction services.
6. Use incentives strategically.

These six significant areas in GC/CM contracting would benefit from consideration and clear decision-making in future GC/CM projects. The City should institutionalize a process that will continue to develop and disseminate GC/CM construction project best practices. We recommend that the City continue to:

- Identify effective practices based on carefully chosen criteria, objectives, and goals;
- Transfer the knowledge among departments;
- Support these practices in project implementation; and
- Monitor the results of adopted practices to measure results and improve practices.

SCOPE AND METHODOLOGY

We reviewed the contract terms and project management methods of the Justice Center Project, the Central Library, Park 90/5, the Landsburg Fish Passage, and Marion O. McCall Hall (MOMH); interviewed GC/CM project managers for the City, the State of Washington, and the University of Washington; and reviewed the practices noted in the *Oregon Public Contracting Coalition Guide to CM/GC Contracting* and other federal and private sector industry guidelines.

All the agencies we contacted that are using the GC/CM method expressed interest in improving and refining the use of the method. GC/CM is a relatively new contracting method and is still evolving. State law limits the use of the GC/CM process to construction projects valued at over

¹The term “buyout savings” is sometimes used in different ways. For this report we are using buyout savings to mean the difference between the MACC *estimate* for all bid packages (developed by the GC/CM) and the actual amounts bid by subcontractors submitting the lowest responsible bid for each component of the work. When the subcontract bids total less than the estimates that make up the MACC, there is “extra” money freed up – “buyout savings.”

\$10 million undertaken by the State of Washington, the state's largest municipalities and certain select public institutions. The five major City projects listed above have been completed, or are nearing completion, with varying experience in respect to meeting schedule and budget. We are issuing this report to support the development of effective practices in this environment by sharing the features of different approaches. The process of researching this report has created an opportunity for City CIP-managing departments to confer with one other and share experiences and opinions. The City should continue to collect data on the outcome of various approaches, evaluate the outcomes, and feed that information back to all project managers for application to future projects.

CHAPTER 2: ISSUES AND RECOMMENDATIONS

1. Use Additional Controls When the GC/CM Bids on Part of the Work

The state statute authorizing GC/CM construction permits the GC/CM to “self-perform” work that is of a type ordinarily performed by the GC/CM as a general contractor.² While we advise the City to take extra steps to ensure a competitive process when the GC/CM is bidding on one or more bid packages in the MACC, we also recognize that there are benefits from the GC/CM performing some of the work on the project. These significant benefits include:

- The GC/CM can exert better control of the project schedule if they are self-performing parts of the work that are essential to the critical path for the project, especially fundamental structural elements such as concrete or framing on which other subcontractors’ work depends;
- Subcontractors may prefer that the GC/CM have a stake in the performance of the work; and
- The ability to self-perform can be part of what makes the job attractive to top-notch GC/CM firms, since they customarily perform the type of work they bid for and have crews on hand to fulfill those responsibilities.

The City should also recognize that the announcement of the intent to bid for “self-performed” work by a GC/CM can discourage other subcontractors from bidding, either because they perceive the GC/CM has an unfair advantage, or because they do not want to alienate the GC/CM who may provide future work for them. This can undermine the competitive process, which might result in the City paying a higher price for the work. This is of most concern when the GC/CM or a subsidiary is the only company to submit a bid for one of the bid packages. To overcome this perception, the City must make extra effort to clarify that the process will be competitive and fair. These extra steps are stated in the recommendation below.

RECOMMENDATION

The City should make an effort to ensure that the bidding process is fair, open and competitive, and take extra care when the GC/CM is the only bidder on a bid package. There are several steps the City should take:

- Independently research and confirm the estimated value of the work, especially if substantial time has passed between the development of the MACC estimate for the work and the opening of the bid package;
- Carefully review the GC/CM’s invitation for bids to ensure that it is complete, open, fully informative, and fair. Ensure that all relevant information is distributed;
- Have the GC/CM provide the other bidders with all relevant details of the GC/CM’s separate scope of Specified General Conditions, along with sufficient explanation so that the other bidders see what scope of work the GC/CM is obligated to provide under that part of its contract;

²See RCW 39.10.061(7). The state law (Revised Code of Washington or RCW) governing GC/CM contracting allows the GC/CM to bid on subcontract work within the project up to 30 percent of the value of the MACC.

- Require the GC/CM to describe in writing its plan to obtain other qualified and qualifying bids;
- Remind the GC/CM of the City's authority to reject the bid and require a re-bid;
- Actively and visibly monitor the entire bidding process for any signs of unfair advantage;
- Seek out potential subcontractors early, and provide assurance to all potential bidders that it is the City's intention that the bidding process will be without unfair advantage to anyone;
- Attend the pre-bid conference and send the same message;
- Invite potential bidders to express any concerns or signs of unfair advantage directly to the City's representative for investigation and action;
- Monitor all other subcontract bids to ensure there is no overlap in scope with the bid package the GC/CM is bidding on that might not be evident to the other bidders;
- RCW 39.10.061 requires that the bid opening be managed by the public body; the City must open all subcontractor bids and lead the analysis of bids where the GC/CM is also a bidder;
- The City should make a critical comparison between the GC/CM's bid and the schedule of values and MACC support documentation regarding that bid package; and
- Consider re-bidding the work as allowed in the City's standard specifications.³

2. Analyze the Project Risks and Make Strategic Choices about Assigning Responsibility for Risk and Control of the Contingency to Avoid Risk

The Role of Contingency in Avoiding Risk. Generally all parties to a construction contract will include some amount of contingency in their project budgets to allow for risks such as scope changes, unforeseen site conditions, and uncontrollable events. Total project contingency for a project may range between 10 percent and 20 percent. With a traditional low-bid form of contracting the owner and contractor never know what level of contingency the other has provided for, because the contractor's price is bid as a lump sum and owners generally do not broadcast their contingency. But contingency is handled somewhat differently in the GC/CM form of contracting. The RCW that authorizes use of the GC/CM contracting method mandates a minimum 5 percent contingency (RCW 39.10.070). While the owner could simply provide this amount in owner's contingency, some amount of contingency may be part of the negotiation of the MACC, and be provided to the GC/CM to avoid risks they have assumed. This requires that the owner carefully consider the risks the contingency is intended to mitigate, and link contingency to the assumption of specific categories of risk.

There are two primary types of contingency in a GC/CM project: the GC/CM (or MACC) contingency⁴ and the owner's contingency. Each of these is generally assigned a particular purpose, often defined in the contract.

³Rebidding is unlikely, since the GC/CM is involved in developing estimates for the bid packages, is part of the owner's team, and is likely to be fully aware of any independent estimate the owner obtains. This advantage to the GC/CM in bidding on one of the bid packages can only be offset by a fully competitive process.

⁴ The GC/CM will most likely have built additional contingency into the price of materials and labor within the MACC estimate.

GC/CM (or MACC) Contingency. The MACC contingency is typically used to cover the following risks:

- Errors and omissions in buyout of the subcontract packages;
- Coordination errors a professional should have detected in the design drawings;
- Interference by the general contractor or a subcontractor with the ability of others to proceed with work for which they are responsible.

If the MACC contingency is confined to these purposes, it is generally set between 2 percent and 5 percent of the MACC, depending on the nature and complexity of the project and the level of completion of design drawings at the time of negotiations.

Owner's Contingency. Owner's Contingency is typically used to cover the following risks:

- Owner-directed changes in scope;
- Design errors and omissions, including incomplete project drawings;
- Coordination errors in the documents that could not reasonably have been anticipated by the GC/CM;
- Unforeseen site conditions;
- Regulatory requirements that differ from construction documents, for example, a regulatory agency (such as the City's Department of Planning and Development) approves something on the plans that the inspector later rejects in the field.

Size of Contingency. There are several factors that can impact the size of contingencies for a GC/CM project.

- As noted above, the state law requires a minimum of 5 percent total contingency for GC/CM projects. The law does not specify the distribution of this minimum 5 percent contingency between the owner and the GC/CM.
- The amount of contingency will vary depending on the point in the design for the project at which the price is locked in. If the MACC is established early in the design phase, a larger contingency is warranted because there is substantial risk that design elements will change, requiring additional cost. If the design is nearly complete, and thus more is known about the project, the contingency would usually be smaller.
- If the project is a repetitive one, or a standard design, and the owner and contractor are very familiar with the process, a smaller contingency might be acceptable.

Distribution of Contingency. If the responsibility for the items typically covered by one contingency (owner's or GC/CM's) is shifted to the other party, the relative size of the contingencies may shift accordingly. That is, if one party assumes more of the risk, then their contingency should be increased proportionately. For the projects we reviewed, there were different approaches to the distribution of responsibility for two areas of risk usually mitigated by the owner's contingency:

- The risk of design errors and omissions; and

- The risk of coordination errors in the documents that could not reasonably have been anticipated by the GC/CM.

On the Central Library and MOMH projects, the owner assumed the risk of design errors and omissions and coordination errors. The GC/CM contingency for these projects was held to a minimum. On the Justice Center, Landsburg Fish Passage, and Park 90/5 projects, the GC/CM carried the risk for these items. Buyout savings augmented the GC/CM contingency in these contracts.

RECOMMENDATION

- For each project, consider alternatives for setting the amount of contingency and which party (owner or GC/CM) should control its use. The choice should be based on a careful evaluation of project-specific risks.
- We recommend that the owner control the project contingency unless substantial risk is shifted to the GC/CM in explicit contractual language. The owner should reserve sufficient contingency under its control to avoid the risks for which it retains responsibility.

3. Write Clear Contract Language Regarding Key Items

3a. Be Explicit in Contract Language Regarding the Assignment of Risk and Contingency, Especially the Risk Associated with Incomplete Project Drawings

We recommend the contract language be explicit about the allocation of risk and the GC/CM's compensation for assuming increased risk. The contract should clearly indicate which party is responsible for each of the standard areas of risk noted above. Some of the City's GC/CM contracts have not been explicit, and could be clearer. To indicate what the owner *is* responsible for, the contract for the Justice Center itemizes what the GC/CM is *not* responsible for, with the implication that the GC/CM is responsible to accomplish everything else within the MACC price:

- 6.3.1 The MACC is the amount mutually agreed to between the owner and Contractor that is required to complete all Work as described in the Contract Documents, except those required for:
- a. Preconstruction Allowance
 - b. Owner-directed changes

We recommend that contract issues related to this provision be clarified. The above list of all Work does not include specific items. The absence from this list of design errors, unforeseen conditions, and regulatory requirements at variance with the contract documents, is intended to mean these items are all included in the MACC and are the responsibility of the GC/CM. A section from a different part of the contract reinforces this message:

- 3.2 Supplemental Contract Documents. The Contractor recognizes that the Contract Documents may not be fully completed or developed at the time of the execution of this Agreement. The Contractor agrees to cooperate with the Owner and the Architect in

order to satisfy the Owner's requirements for the Project and to incorporate all the Work described under other Contract Documents hereafter completed or developed. The Contractor and the Owner recognize that construction may commence on the basis of scope or incomplete Contract Documents; and in such event, additional Contract Documents will be prepared and issued, from time to time, for purposes of construction which will detail more completely all requirements of the Work. The Contractor and Owner have agreed to the Maximum Allowable Construction Cost (MACC) set forth above. The Contractor represents to the Owner that the Contract Documents are sufficiently complete to enable the Contractor to establish the Guaranteed Contract Cost (GCC) of the Work, and the issuance of subsequent Contract Documents will not affect the GCC of the Work, unless a change in the scope of the Work is required. A change in the scope of the Work is not warranted if the portion of the Work was reasonably inferable from or contemplated by, or a prudent contractor should have realized that same was necessary or appropriate under the Contract Documents in existence at the time the GCC of the Work was approved by the Owner. During performance of the Work, the Contractor agrees to use its best efforts, exercising its best and prudent judgment, to accomplish the Work in conformance with, and as required or described by, or referred to in, the Contract Documents then available and developed. [Justice Center contract, section 3.2, page 3]

However, a subsequent section seems to identify *specific* items the Contractor (GC/CM) is responsible for:

6.3.3 The Contractor shall be responsible for all costs related to subcontractor claims or charges that result from mistakes or omissions in the subcontract buyout, coordination errors and omissions in the Construction Documents which the Contractor reasonably should have detected, or interference between subcontractors and the Contractor or between subcontractors and other subcontractors. If contingency funds are available within the MACC, Contractor may use said funds to offset the costs outlined in this Subsection 6.3.3. If contingency funds are not available within the MACC, Contractor will be responsible for the overages. [Justice Center contract, section 6.3.3, page 10]

This could lead to confusion, since this section does not say the contractor *is* responsible for design errors and omissions, incomplete project drawings, or coordination errors not inferable from the construction documents. Rather than expect the reader to infer what is missing from the list of exceptions to section 6.3.1, or to piece together these three contract sections and make sense of them altogether, it would be clearer to state standard risk elements that are the responsibility of the GC/CM or owner. Contracts should explicitly state which party is responsible for design errors (beyond those that could have been "reasonably detected"), incomplete project drawings, unforeseen conditions, and regulatory requirements. These contract sections should be aligned so the relationship among them is clear. Such clarity reduces the likelihood of misunderstandings and later disputes about which party is responsible for particular unexpected costs.

RECOMMENDATION

We recommend the use of explicit contract language regarding the allocation of risk and contingency. For instance, contract language should address what is included in the MACC as

well as what is excluded, what risks are the owner's responsibility and what risks are assumed by the GC/CM, and which party controls the contingency available to mitigate that risk.

3b. Be Explicit in Contract Language Regarding Control and Use of Buyout Savings

Background: Estimates Versus Actual Bids. The GC/CM's MACC is primarily composed of a total dollar amount the GC/CM and the City have negotiated and agreed to as the estimated bid package price. Each bid package will be publicly bid. The estimate is based on studies conducted during preconstruction on areas such as constructability, value engineering,⁵ and work sequence. The City, the Architect/Engineer and the GC/CM are all involved in this process, culminating in the final negotiation of the MACC numbers. Ultimately the bid packages are put out for bid and awarded to the lowest responsible bidder.⁶ At that point, the actual bid amounts can be compared to the estimates prepared for the MACC. Since the MACC is established based on an estimate, there is a risk that the bids will come in above or below the estimate, especially if considerable time has passed before a bid package is put out for bids, or if the market is particularly volatile. However, since the GC/CM is involved in the design phase, and brings expertise in constructing similar projects, the estimate is likely to be a knowledgeable one. In the following section we will discuss some of the approaches to addressing the possibility that the buyout of the subcontract bid packages will be lower than the estimates in the MACC, because this could result in savings for the owner.

“Buyout Savings”—When the Bids Come in Lower than Estimates. If the actual bids total less than the estimates the difference is often termed “buyout savings,” indicating the subcontracts were “bought out” for less than estimated. In our review of City GC/CM projects, we observed two basic approaches to handling buyout savings: one approach attempted to identify buyout savings as soon as most of the subcontract bid packages were awarded, and recoup some of the buyout savings to the owner; the other approach left the buyout savings in the MACC under the control of the GC/CM—essentially providing additional contingency.

Some of the City's contracts were silent on the issue of buyout savings, others were explicit. Since buyout savings may or may not materialize they represent an uncertainty in the finances for a project. We recommend being explicit, explaining in detail what happens if there are buyout savings. The contract for the Landsburg Fish Passage is a good example of explicit language regarding buyout savings:

6.7.7 If the Contractor is successful in awarding all of the subcontracts in its approved Subcontract Plan in an amount less than the negotiated MACC Construction Cost, then the Contractor shall retain the savings within the MACC Contingency to be administered in accordance with subsection 6.3.3. Any savings remaining at Physical Completion of the project from expenditures for the work totaling less than the MACC shall accrue to the Owner, except that the GC/CM shall bill for and receive an incentive payment in

⁵ Value engineering is a process of examining construction processes to determine if equivalent quality can be achieved through less expensive practices or products.

⁶ RCW 39.10.061(6)(h) requires that “Subcontract bid packages shall be awarded to the responsible bidder submitting the low responsive bid.” The owner and general contractor/construction manager are allowed to determine subcontractor bidding eligibility using specific evaluation criteria.

accordance with subsection 6.2. [Landsburg Fish Passage contract, section 6.7.7, page 11, emphasis added]

The same concept in the Justice Center contract can be inferred from comparing the opening section of the contract, which states the total guaranteed contract cost, with the rest of the contract that says nothing about reducing that amount. According to the Justice Center Project Director, the parties fully understood during MACC negotiations that the GC/CM controlled the total MACC amount available for constructing the project, and that any buyout savings would become part of the GC/CM contingency.

The contracts for the Central Library, Marion O. McCall Hall, and typical contracts for the State of Washington and the University of Washington identify buyout savings and specify all or a portion of the savings are to be under the owner's control. Since the buyout savings can be significant (for example, \$4 million in the case of the Justice Center⁷), we believe it is advisable to be explicit in the contract language about which party controls these funds between the time the bid is awarded and the end of the project.

If the owner takes control of buyout savings, and then spends the money on added project scope, there is the potential for the GC/CM's fee to be applied a second time to the additional (change order) work. Some of the City's contracts have been clear about no fees being permitted on additional work. We recommend that the City consider such language on all GC/CM contracts.

RECOMMENDATION

- When writing construction contracts, ensure that buyout savings are clearly defined in the contract, and that contract terms specify how the savings are to be used and who controls their expenditure.
- The contract should also be explicit about whether the GC/CM's fee is to be applied to change order work, especially if such work is funded from buyout savings.

4. Carefully Review Changes for Appropriate Pricing, Overhead, and Profit

4a. Perform Due Diligence in Establishing the Price for all Contract Changes

The owner has an interest in the potential buyout savings because, at the end of the project, savings either revert to the owner or are shared with the GC/CM. This arrangement is part of the flexibility provided by the RCW for the GC/CM contracting method:

A public body may include an incentive clause in any contract awarded under this section for savings of either time or cost or both from that originally negotiated. No incentives granted may exceed five percent of the maximum allowable construction cost. If the project is completed for less than the agreed upon maximum allowable construction cost, any savings

⁷ The Justice Center used \$.9 million of the buyout savings to exercise an option in the contract to purchase more expensive stone for the building façade. An additional \$1.8 million was used for additional project elements, including moving the City's motor pool to the SeaPark garage and \$700,000 to buy furniture, fixtures, and equipment.

not otherwise negotiated as part of an incentive clause shall accrue to the public body.
[RCW 39.10.061(8), emphasis added]

Protecting this interest requires that a sufficient level of due diligence be performed to ensure that the City is receiving valid and fair prices for subcontractor expenditures beyond their original bid. Adequate administration for cost reviews of change proposals on a project requires the following components:

- Review the scope and evaluate it for entitlement. Is it really a scope change that couldn't have been anticipated from the drawings?
- If it is a change in scope, review the cost proposal or estimate to be sure it is fair and reasonable. This estimate should include a detailed breakdown of labor, materials, equipment, transportation or delivery charges, bonds, insurance, permits, testing, coordination and superintendence, overhead and profit as applicable.
- Maintain a record of the price negotiations.

While the contract often allocates responsibility for these tasks to the GC/CM, the owner's representative must conduct sufficient oversight to ensure the process is being performed well and is protecting the owner's interest in any potential savings.

The State of Washington has a \$10,000 threshold for requiring cost reviews of change orders by their in-house cost estimator. The University of Washington has a \$20,000 threshold. Both state entities actively track the cost reviews, negotiations, and savings realized from this process. Similarly, the Central Library and MOMH projects used cost estimators hired by the owner to conduct selective cost reviews of the GC/CM's change proposals to substantiate the cost. It should be noted that, as discussed above, these two projects accepted the risk of design drawing errors and omissions, so the owner had to pay for change orders resulting from these causes. This increases the pressure on the owner to ensure the change orders are fairly priced.

In the Justice Center contract the owner did not list design errors and omissions among its responsibilities. The GC/CM assumed the risk of bringing the project in for the MACC price regardless of the magnitude of design errors and omissions. This created a strong incentive for the GC/CM to ensure that change orders were legitimate and fairly priced, so that the cost of the project did not exceed the MACC. Taking a more limited role, the City's Justice Center project team reviewed and agreed to the scope for change proposals that did not result in a change to the MACC, and also *reviewed* the cost. But they did not conduct full, independent cost estimates unless they agreed the change was beyond the original contract scope (outside the scope of the MACC). The project team review included weekly meetings attended by the City Project Manager, the consultant Project Manager (Shiels Obletz Johnsen), the Architect, and the Contractor to review the scope and cost of changes within the MACC. Of the proposals the City's project team reviewed, 33 percent were voided at the meetings; 15 percent to 20 percent were revised based on comments in these meetings. Except in one instance, the project team did not conduct sample independent cost estimates.⁸

⁸ In response to a draft of this audit report, the City's Project Manager for the Justice Center project did undertake an independent cost estimate of Valley Electric BEA #96.

It is part of the Project Manager's job to ensure that the GC/CM is protecting the owner's interest in the price negotiations with subcontractors. To fulfill this duty, the Project Manager could test a sample of the GC/CM's cost estimates to satisfy the City's interest in ensuring these estimates appear to be fair and reasonable. If the City found, through these samples, that the GC/CM was not protecting the City's interests (that is, was agreeing to subcontractor change expenses that were overpriced) the issue could be taken up with the GC/CM without the City inserting itself as a party in negotiations between the GC/CM and its subcontractors.

In our opinion, the MACC is not *the* contract price, it is the *maximum* price. If savings can be generated, their distribution should be clearly provided for in the contract. Without a high degree of constant owner due diligence throughout the project, the owner risks paying either more than necessary for the project or may forego the opportunity to use savings to add elements to the scope.

RECOMMENDATION

We recommend that City Project Managers be actively engaged with the GC/CM to verify that change orders are legitimately changes to the project scope and that they are priced appropriately. The responsible City department should consider conducting independent cost estimates of proposed contract changes.

4b. Watch for Possible Multiple Layers of Overhead and Profit Markups

The City could end up paying twice for overhead and profit if "specified general conditions" are subjected to the GC/CM fee.⁹ On large projects such as these, the application of the fee can represent a substantial dollar amount.¹⁰ In reviewing the five recent City GC/CM contracts, we noted some variation in approach in applying the GC/CM's fee (the markup for overhead and profit) to the project's component costs. Upon review, at least two different interpretations of the RCW are possible. We recommend the City take note of the different possible interpretations, described below, and make a strategic choice in the project negotiations about whether to apply the fee to the specified general conditions.

Ambiguity in the RCW Governing Application of the GC/CM Fee. RCW 39.10.061(5) states that the guaranteed contract cost in a GCCM project includes the following components:

...[T]he fixed amount for the detailed specified general conditions work, the negotiated maximum allowable construction cost [MACC], the percent fee on the negotiated maximum allowable construction cost, and sales tax.

⁹ General conditions work involves the construction project's jobsite administration and overhead. A subset of these general conditions labor costs is termed "specified" because they represent a specified scope of work and a specified level of staffing for a specified price. Usually the specified general conditions consist of the agreement between the parties for the GC/CM to provide salaried, field labor to manage buyout and construction. Subcontractors perform the bulk of the construction work under the management of the GC/CM.

¹⁰ The fees on the five City projects we reviewed ranged from 2.25 percent (\$1,678,686) on MOMH to 6 percent, (\$501,033) on the Landsburg Fish Passage. The fee for the Justice Center was 3.5 percent (\$2,585,857).

This language suggests the percent fee is applied to the MACC, and not to the specified general conditions, which are identified as separate from the MACC. The Central Library, MOMH, Landsburg Fish Passage, Park 90/5, and GC/CM programs for the University of Washington and State of Washington Department of General Administration do not apply the fixed fee to the specified general conditions. The rationale for this is that the RCW requires the price for specified general conditions to be a fixed (bid) amount. Bid amounts are often estimated using unit prices that already include a markup for overhead and profit.

However, another paragraph in the RCW (39.10.061(4)) is more ambiguous:

After the committee has selected the most qualified finalists, these finalists shall submit final proposals, including sealed bids for the percent fee, which is the percentage amount to be earned by the general contractor/construction manager as overhead and profit, on the estimated maximum allowable construction cost and the fixed amount for the detailed specified general conditions work. [Emphasis added]

This language could be interpreted to apply the fee both to the estimated MACC and the specified general conditions work. On the Justice Center project the specified general conditions were included in the MACC, consequently the GC/CM fee of 3.95 percent was applied to the \$1.5 million specified general conditions bid. If the fixed fee were not charged on the specified general conditions line item in the Justice Center contract, the savings might have been \$58,657. The request for proposals for the Justice Center stated that “the MACC does not include GC/CM fee, bid general conditions work, and Washington State sales tax.”¹¹ [Emphasis added]

When questioned about this, the Justice Center Project Director responded that the unit rates for the general conditions work proposed by the GC/CM “were found to be extremely reasonable and competitive in terms of the services provided and not excessive in terms of the salaries plus benefits. The rates used are well below industry standards when compared to other firms providing similar construction management/project management services.”¹² He indicated that the decision to include the specified general conditions in the MACC was reached as part of the final negotiation of the MACC.

RECOMMENDATION

If specified general conditions are included in the MACC and are subject to the negotiated markup, it is advisable to ensure there is not a markup already included in unit prices, so the City is not paying twice for overhead and profit. However, since RCW 39.10.061 suggests the specified general conditions are to be bid by the GC/CM as a fixed amount,¹³ we recommend excluding specified general conditions from the MACC.

¹¹ *City of Seattle Request for Proposals, General Contractor/Construction Manager for New Justice Center, Seattle Washington*, issued October 1, 1999, Attachment 1, Section 1.F.V.

¹² The hourly rates ranged from \$25/hour for an Office Assistant to \$70/hour for the Hoffman Project Manager and \$75/hour for the Hoffman Vice President.

¹³ The contract should specify how specified general conditions work associated with added scope will be compensated.

5. Choose the Best Option for Pricing Preconstruction Services

One of the primary advantages of using the GC/CM contracting method rather than the traditional design-bid-build method is that the general contractor becomes involved in the process during the preconstruction or design phase. Early involvement of the GC/CM in project planning and design contributes to a high degree of confidence in the ability to complete the project within the owner's budget. These early services are termed "preconstruction services" and are usually priced separately from the costs for constructing the project (the Guaranteed Contract Cost). Some of the projects we reviewed used a consultant contract, rather than a construction contract, to contract for preconstruction services. The owner usually requests details from bidders about the number of hours assumed for preconstruction services, the persons involved, and the rates for those staff, in order to determine if the bid includes sufficient resources to accomplish the scope. Preconstruction services provided by the GC/CM supply detailed information about the GC/CM's cost estimates for the subcontract bid packages that make up the MACC. This is a significant benefit to the City because with this documentation of what the City and the contractor knew or believed about the scope of work, the City can avoid subsequent change orders that incorrectly allege differing conditions or a change in plan.

If the preconstruction services are paid at an hourly rate for all hours required, the City should take extra care to ensure it is being fairly charged. While none of the City projects we are aware of have used an unlimited hourly (cost-plus) approach to preconstruction services, it is an option. The Justice Center project established a maximum price for preconstruction services and paid at an agreed upon hourly rate up to that price, but not beyond it. On the Central Library project the preconstruction services were bid as a lump sum. Preconstruction services are often agreed to before MACC is determined, so before the GC/CM knows if they have been awarded the work. The GC/CM is often willing to provide a good price for the services to speed the process toward establishing the MACC and signing the contract. To preserve these savings, when hourly rates are used the City should clarify what is included in the hourly rate (whether it is to be estimated actual cost or unit prices that include overhead and profit, burdened or unburdened labor). The invoices and backup materials can then be audited for compliance with the negotiated contract. The City needs to ensure that there is a clear understanding regarding any additional fee for overhead and profit that might be added on top of unit rates.

RECOMMENDATION

If the preconstruction services are not bid as a lump sum, but instead are paid at an hourly rate:

- Require clarity in the proposals regarding what is included in the hourly rate (whether it is to be estimated actual cost or unit prices that include overhead and profit, burdened or unburdened labor).
- Be clear in the contract language about whether any additional fee for overhead and profit will be allowed on top of the hourly rates included in the proposal.

6. Use Incentives Strategically

The state law regulating GC/CM contracting allows for incentives to the contractor:

A public body may include an incentive clause in any contract awarded under this section for savings of either time or cost or both from that originally negotiated. No incentives granted may exceed five percent of the maximum allowable construction cost. If the project is completed for less than the agreed upon maximum allowable construction cost, any savings not otherwise negotiated as part of an incentive clause shall accrue to the public body. [RCW 39.10.061(8)]

RCW 39.10.070(2) allows “incentive payments to contractors for early completion, cost savings, or other goals if such payments are identified in the request for proposals.” The City has used incentives in most of its GC/CM projects to encourage achievement of “social goals” such as small business participation, as well as cost savings. Some owners feel that offering a portion of the “savings” to the contractor will provide incentive to the contractor to increase diligence and efficiency to reduce costs. However, it is unclear that savings clauses actually result in a lower price at project completion. The Office of City Auditor has not performed analysis of the City’s GC/CM projects to determine if the incentive clauses operated to the City’s benefit. Project directors for the City report that the GC/CMs do take seriously the effort to cut costs. They also believe the incentive clauses have helped the City achieve social policy goals, especially inclusion of small businesses among the subcontractors. However, we believe incentive clauses should not simply become an automatic part of every GC/CM contract. Incentive clauses should be thoughtfully considered, and included only if careful analysis shows clear benefits to the owner.

RECOMMENDATION

As the City gains experience with the GC/CM method, the City should conduct retrospective analysis to assess the usefulness of incentives, especially financial incentives. Share the results among City CIP departments so that incentives are used to optimal strategic advantage.




City of Seattle

Gregory J. Nickels, Mayor

M E M O R A N D U M

DATE: January 21, 2004

TO: Susan Cohen, City Auditor
Mary Denzel, Assistant City Auditor
Office of the City Auditor

FROM: John Franklin, Director 
Fleets & Facilities Department

SUBJECT: GC/CM Project Audit – Executive Response

First, we would like to thank the staff of the Auditor's office for the time they spent to evaluate the complex GC/CM methodology, contracts, and issues related to these extraordinary and unique projects. The Auditor's staff worked diligently to understand the nuances of the law and agreement terms, differences between projects, and the concerns of project managers as the audit drafts were developed. We will evaluate and consider their recommendations as it relates to future GC/CM projects.

We believe the final audit report generally reflects the success of the GC/CM approach for the City while also advancing our collective aim of perfecting this new tool to benefit the basic goal of completing major complex capital projects in a timely fashion, for a reasonable cost, while ensuring that the facilities have lasting and unique quality.

Our experience is that the City has seen tremendous success using the GC/CM methodology. The flexibility of the methodology has allowed the City to complete some extremely challenging and difficult projects that have since received local and national acclaim. The GC/CM methodology was particularly designed to allow a public owner to get the best project at a fair price through negotiation of terms, conditions, and responsibilities.

In undertaking a review of the City's first several experiences with the GC/CM alternative public works approach, it is crucial to recall why the City and other

jurisdictions promoted a change in State legislation to provide for the new alternative contracting options. The rigidity of the design-bid-build approach failed to take advantage of the expertise of construction firms to review and make recommendations on the design and to introduce constructability and value engineering early in the process of projects. The ordinary bidding methodology, where design work is done without the input of the construction contractor, does not promote or value true collaboration and teamwork. The absence of early communications and give and take among the owner, the design firm, and the contractor can lead to misunderstandings, claims, and quality issues.

The GC/CM approach recognizes that the give and take, teamwork approach, and early involvement of construction expertise has a net benefit. Yes, there are risks as there are with design-bid-build, and each party must continue (as in the past) to look out for his/her interest, but there is also a tremendous benefit to using a much more collaborative, partnership approach.

Again, given that each of these projects are extremely complex and unique, we appreciate the time taken by the Office of the City Auditor to understand the individualized approaches taken to get the maximum benefit for the City. We couldn't be more pleased with the functionality and value of our new Justice Center, City Hall, McCaw Hall, and the developing Central Library and other key civic facilities being built using alternative contracting models. We look forward to similar success with future projects, and will take into consideration these findings as we plan for new facilities.

cc: GC/CM Project Staff & Directors

Office of City Auditor's Report Evaluation Form

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Our mission at the Office of City Auditor is to help assist the City in achieving honest, efficient management and full accountability throughout the City government. We service the public interest by providing the Mayor, the City Council and City managers with accurate information, unbiased analysis, and objective recommendations on how best to use public resources in support of the well-being of the citizens of Seattle.

Your feedback helps us do a better job. If you could please take a few minutes to fill out the following information for us, it will help us assess and improve our work.

* * * * *

Report: **General Contractor/Construction Management (GC/CM) Form of Contracting: Issues and Recommendations**

Release Date: February 12, 2004

Please rate the following elements of this report by checking the appropriate box:

	Too Little	Just Right	Too Much
Background Information			
Details			
Length of Report			
Clarity of Writing			
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Suggestions for our report format: _____

Suggestions for future studies: _____

Other comments, thoughts, ideas: _____

Name (Optional): _____

Thanks for taking the time to help us.

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